

Before the  
Federal Communications Commission  
Washington, D.C. 20554

RECEIVED  
JUL 31 1997  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
 )  
Advanced Television Systems )  
and Their Impact Upon the ) MM Docket No. 87-268  
Existing Television Broadcast )  
Service )

TO: The Commission

**REPLY TO JEFFERSON-PILOT COMMUNICATIONS COMPANY'S  
OPPOSITION TO PETITION OF SHENANDOAH VALLEY EDUCATIONAL  
TELEVISION CORPORATION FOR PARTIAL RECONSIDERATION**

Shenandoah Valley Educational Television Corporation ("Shenandoah"), licensee of public station WVPT(TV) (NTSC Channel 51, Staunton, Virginia), submits this reply to the Opposition to Petition of Shenandoah Valley Educational Television Corporation for Partial Reconsideration filed by Jefferson-Pilot Communications Company ("Jefferson-Pilot"). Jefferson-Pilot opposes Shenandoah's request that the Commission change its DTV channel assignment from Channel 19 to Channel 11.<sup>1/</sup> Jefferson-Pilot opposes this request because it would prefer DTV Channel 11 to its current DTV Channel 54 assignment in Richmond and "the proximity of Richmond to

<sup>1/</sup> Opposition to Petition of Shenandoah Valley Educational Television Corporation for Partial Reconsideration filed by Jefferson-Pilot Communications Company, MM Docket No. 87-268 (July 18, 1997) ("Jefferson-Pilot Opposition") at 1.

Staunton appears to foreclose assigning DTV Channel 11 to both licensees."<sup>2/</sup>

Jefferson-Pilot openly admits it intends to move its DTV operations after the transition to its current NTSC channel, Channel 12. Nonetheless, Jefferson-Pilot would have the Commission value its *temporary* use of Channel 11 over Shenandoah's need for a permanent DTV Channel on which to provide its noncommercial and educational programming. Because the public interest strongly favors the assignment of DTV Channel 11 to Shenandoah rather than to Jefferson-Pilot, DTV Channel 11 should be assigned to Shenandoah and Jefferson-Pilot's opposition should be dismissed.

As noted in Shenandoah's petition, WVPT(TV)'s DTV operations on Channel 19 would cripple or destroy the station's ability to provide its educational programming to viewers served by W19BB, Shenandoah's Channel 19 translator in Charlottesville, Virginia (Albemarle County). Because mountainous terrain limits the coverage area of WVPT(TV), translators are vital to Shenandoah's continuing ability to reach a large portion of its viewers and meet its educational and noncommercial mission.<sup>3/</sup> The Charlottesville translator is especially important in this region.

Because it appears impossible to locate an alternative translator channel to serve the Charlottesville/Albemarle County area, Shenandoah requested in its petition that the Commission take into account the public interest benefits associated with preserving the

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<sup>2/</sup> Id. at 2; see also Petition for Reconsideration of Jefferson-Pilot Communications Company, MM Docket No. 87-268 (June 13, 1997).

<sup>3/</sup> In addition, much of Shenandoah's service area is within the National Radio Quiet Zone, which further limits Shenandoah's ability to provide service. See Petition for Partial Reconsideration of Shenandoah Valley Educational Television Corporation, MM Docket No. 87-268 (June 13, 1997) at 3.

service W19BB now provides, and on reconsideration assign a different DTV channel to WVPT(TV).<sup>4/</sup>

Losing translator service to the Charlottesville/Albemarle community would harm the public interest in a number of ways. As explained in Shenandoah's petition, members of the community served by W19BB would lose the educational programming historically provided by Shenandoah.<sup>5/</sup> In addition, losing access to the Charlottesville/Albemarle community would cause severe economic harm to an already struggling public station and would threaten WVPT(TV)'s ability to maintain the quality of educational programming currently provided to other communities it serves.<sup>6/</sup>

At the time that it filed its petition, Shenandoah was still investigating the viability of Channel 11 as an alternative DTV channel assignment. Further analysis has shown that Channel 11 is the most viable alternative DTV channel on which Shenandoah

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<sup>4/</sup> Shenandoah's case is not a matter of a translator seeking primary status vis-a-vis a full power station. Here the primary station and the translator are licensed to the same entity, and without causing significant interference or other harm to any other entity, it has proposed a minor adjustment in the Commission's allotments/assignments that maximizes service to the public.

<sup>5/</sup> Shenandoah provides a noncommercial, educational television service to all or a part of 21 counties in Virginia and West Virginia using two transmitters and five translators. Since its inception in 1964, Shenandoah has provided in-school programming to the schools within its service area, including a full schedule of over-the-air educational programs from 10:00 a.m. until 3:00 p.m., Monday through Friday during the school year.

<sup>6/</sup> WVPT(TV) is the smallest public television station in Virginia, both in budget and in staff, and reaching the Charlottesville/Albemarle community is essential to its continued viability. The demographics for income and educational level of Charlottesville/Albemarle are the highest by far of all cities and counties in the areas that WVPT(TV) serves. A full 25% of the station's member contributions come from viewers residing in the Charlottesville/Albemarle area, and 30% of the retail value of auction items sold on WVPT(TV) originate in that area.

could provide its educational and noncommercial television service. This analysis indicates that Shenandoah's DTV operations on Channel 11 would effectively replicate Shenandoah's current NTSC coverage area, while causing minimal interference to surrounding stations.<sup>7/</sup>

Shenandoah's DTV operations on Channel 11 would result in far less interference to other stations than would Jefferson-Pilot's proposed operations on the channel.<sup>8/</sup> Indeed, in order to replicate its current NTSC coverage area using DTV Channel 11, Jefferson-Pilot would cause interference to *nine times the population and seventeen times the area* than would receive interference from Shenandoah's proposed operations.<sup>9/</sup> While Shenandoah's proposal does result in some interference -- an inevitable consequence of trying to squeeze 1601 DTV channel assignments into spectrum already crowded with NTSC stations -- it does provide an alternative DTV assignment that saves critical noncommercial and educational service while limiting the interference to a level well within the range deemed acceptable by the Commission in

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<sup>7/</sup> See Engineering Statement (Exhibit 1). This potential interference would affect two stations -- WSLs-TV (NTSC Channel 10, Roanoke, VA) and the NBC affiliate WBAL-TV (NTSC Channel 11, Baltimore, MD). The small amount of interference resulting from Shenandoah's operations on DTV Channel 11 would not result in any significant public interest harms because the interference to WSLs-TV is confined to a relatively small area of low population density. In the case of WBAL-TV, the predicted interference falls in suburban Virginia, an area outside of WBAL-TV's Baltimore DMA which already receives NBC service from the local NBC affiliate, WRC-TV (NTSC Channel 4, Washington, D.C.). Id. at 2-3.

<sup>8/</sup> Id. at 3-4.

<sup>9/</sup> Id. at 4.

making its DTV allotments/assignments.<sup>10/</sup> To the extent that Shenandoah's use of DTV Channel 11 in fact causes harmful interference to surrounding stations, future adjustments in facilities might be possible to ameliorate such interference.

Shenandoah's request for DTV Channel 11 is based on serious concerns regarding Shenandoah's continuing ability to provide valuable noncommercial and educational television to the communities it serves. By contrast, Jefferson-Pilot's request for DTV Channel 11 is based on matters of convenience, which are in no way unique to Jefferson-Pilot and which do not threaten the viability of Jefferson-Pilot's station. Jefferson-Pilot claims that the assignment of DTV Channel 11 to WWBT(TV) in lieu of DTV Channel 54 would "allow Jefferson-Pilot to avoid the business planning uncertainties inherent in the use of DTV Channel 54,"<sup>11/</sup> "allow WWBT to colocate its DTV antenna on the same tower with its NTSC antenna,"<sup>12/</sup> and "eliminate the need for designing and installing a UHF transmission system that would be rendered superfluous at the end of the transition period."<sup>13/</sup> Jefferson-Pilot also states that use of DTV Channel 54 "would force WWBT to relocate its digital operations at the end of the DTV transition period" and "presents significant engineering difficulties for WWBT because of the age and location of its current antenna tower."<sup>14/</sup>

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<sup>10/</sup> Id. at 3.

<sup>11/</sup> Jefferson-Pilot Opposition at 2.

<sup>12/</sup> Id. at 3.

<sup>13/</sup> Id.

<sup>14/</sup> Id. at 2-3.

Jefferson-Pilot characterizes its reasons for seeking a new DTV channel as "public interest goals,"<sup>15/</sup> when in fact they are inconveniences and costs inherent in the DTV transition. They do not outweigh the public interest harms associated with the loss of service resulting from Shenandoah's current DTV assignment. Moreover, Jefferson-Pilot openly admits that it plans ultimately to conduct its DTV operations on Channel 12 -- its current NTSC channel. Thus, Jefferson-Pilot is merely seeking a temporary resting place for its DTV operations. By contrast, Shenandoah is seeking a permanent home for its digital operations, which is critical to its continued ability to provide the important noncommercial and educational services it currently provides.

Shenandoah urges the Commission to weigh the public interest concerns of this unique situation and determine that assigning DTV Channel 11 to Shenandoah will serve the public good. Jefferson-Pilot has an appropriate and acceptable DTV channel assignment for WWBT(TV). This assignment poses no unique challenges for Jefferson-Pilot, which intends to relocate its DTV operations to Channel 12 at the end of the transition in any event. In light of the public interest benefits at stake, we respectfully

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<sup>15/</sup> Id. at 2.

request that the Commission assign DTV Channel 11 to Shenandoah on reconsideration,  
and dismiss the opposition filed by Jefferson-Pilot.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Kurt A. Wimmer', is written over a horizontal line.

Kurt A. Wimmer  
Jennifer A. Johnson

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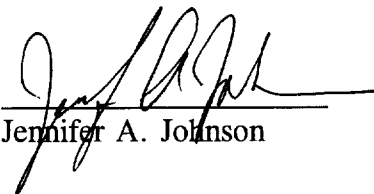
July 31, 1997

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing Reply to Jefferson-Pilot Communications Company's Opposition to Petition of Shenandoah Valley Educational Television Corporation for Partial Reconsideration has been served by first-class mail, postage prepaid, this 31st day of July, 1997 on:

James R. Bayes, Esq.  
Rosemary C. Harold, Esq.  
Wiley, Rein & Fielding  
1776 K Street, N.W.  
Washington, D.C. 20006

*Counsel for Jefferson-Pilot Communications Company*

  
Jennifer A. Johnson



# **EXHIBIT 1**

**ENGINEERING STATEMENT**  
**IN SUPPORT OF THE**  
**SHENANDOAH VALLEY EDUCATIONAL TELEVISION CORPORATION'S REPLY TO**  
**JEFFERSON PILOT COMMUNICATIONS COMPANY'S**  
**OPPOSITION TO PETITION OF SHENANDOAH VALLEY EDUCATIONAL**  
**TELEVISION CORPORATION**  
**FOR PARTIAL RECONSIDERATION OF**  
**THE SIXTH REPORT AND ORDER IN MM DOCKET NO. 87-268**

July 30, 1997

Shenandoah Valley Educational Television Corporation.  
Harrisonburg, Virginia

Engineering Statement  
in Support of the  
Shenandoah Valley Educational Television Corporation's Reply to  
Jefferson Pilot Communications Company's  
Opposition to Petition of Shenandoah Valley Educational Television Corporation  
for Partial Reconsideration of  
the Sixth Report and Order in MM Docket No. 87-268

The firm of Moffet, Larson and Johnson, Inc. (MLJ) has been retained by Shenandoah Valley Educational Television Corporation (SVETC), licensee of WVPT, NTSC channel 51, Staunton, Virginia to provide engineering support for its reply to the opposition to Petition of Shenandoah Valley Educational Television Corporation for Partial Reconsideration of the Sixth Report and Order in MM Docket No. 87-268 (Sixth Report) filed by Jefferson Pilot Communications Company, (Jefferson Pilot) the licensee of station WWBT(TV) on NTSC channel 12 at Richmond, Virginia.

WVPT was allotted channel 19 for DTV operation. This channel would cause unacceptable interference to existing service of WVPT's channel 19 translator serving the Charlottesville, Virginia area. This area, while within WVPT's licensed Grade B contour, is shielded from the main antenna and relies on the channel 19 for reception of this public TV service. For this reason and others SVETC requested the assignment of television channel 11. The other reasons include the superior propagation characteristics of VHF compared to UHF, particularly in rough terrain such as occurs in the vicinity of Staunton, Virginia. Operation on UHF generally poses a handicap for any station; this is especially true in this area where terrain often limits coverage.

Since the filing SVETC has conducted interference studies to determine the feasibility of DTV operation on channel 11 at Staunton. Table 1 is a distance separation study for operation on channel 11 at the present WVPT site on Elliot Knob; distances from the new rules were used in the study. Table 1 shows that operation on channel 11 at the present WVPT site complies with the mileage separation requirements of the new rules.

Further studies using the Institute for Telecommunications Services (ITS) software have shown that such operation would cause new interference to WSLs-TV on channel 10 and WBAL-TV on channel 11. In these studies WVPT coverage was replicated on channel 11 with a maximum ERP of 3.2 kW<sup>1</sup> and the present WVPT antenna pattern. The results of these studies are shown

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<sup>1</sup> This is the minimum ERP permitted under the rules for operation on channel 11.

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on Figures 1A through 2B. Figure 1A shows predicted interference to WBAL-TV for the present allotments. Figure 1B, shows predicted interference as in Figure 1 with WVPT operating on channel 11 as described above. Similarly, Figure 2A shows "present" interference to WSLs-TV and Figure 2B shows the impact of adding WVPT on channel 11.

Predicted interference to WBAL-TV falls in suburban Virginia out side of the Baltimore Designated Market Area (DMA). The area is within the Washington DMA. Station WBAL-TV is affiliated with the NBC network as is WRC-TV in the Washington DMA. As shown on Figure 2B, predicted interference to WSLs-TV is confined to a relatively small area of low population density in Rockbridge County. Predicted interference to WBAL-TV and WSLs-TV in this case is much less than interference to other stations from assignments adopted in the Sixth Report and Order. The areas of additional predicted interference from WVPT on channel 11 are comparable or less than many areas that would occur as a result of DTV operations included in the Commission's table.

Jefferson Pilot states that among other channels, channel 8 is available according to MSTV for use in Staunton. Channel 8 is the only VHF channel that MSTV lists as "available" other than channel 11. Table 2 is a distance separation study for operation on channel 8 at the WVPT site. The table shows a severe short spacing (77.4 kilometers) with regard to WRIC-TV on channel 8 at Petersburg, Virginia. If WVPT were to use channel 8 there would be predicted interference to the analog operation of WRIC-TV, a WWBT competitor in the Richmond market.

In its petition for reconsideration and opposition, Jefferson Pilot requested channel 11 to replicate its operation on channel 12 in Richmond, Virginia. However, DTV operation on channel 11 at Richmond would cause widespread predicted interference to the service of existing NTSC stations. Table 3 is a distance separation study for operation on channel 11 at the present WWBT site. Jefferson-Pilot does not show any interference studies to evaluate the impact of its proposed DTV operation. The sole basis for the request rests on the assertion that the Association for Maximum Service Television (MSTV) concluded that the channel was available for use in the Richmond market.

A series of interference studies were conducted to determine the impact of operation on channel 11 in Richmond on other services. These studies show that operation on channel 11 at WWBT would cause interference to the service of stations WBAL-TV in Baltimore; WTVD in Durham, North Carolina, and WAVY in Portsmouth, Virginia. In its petition Jefferson Pilot stated that an ERP of 12.6 kW and an antenna HAAT of 241 meters virtually replicated WWBT coverage. Studies using the ITS software indicates that a slightly higher ERP (13.1 kW) is required for replication. The studies were completed using this higher power. The results of the studies are shown in Figures 3A through 3E. These are comparable to the above maps for WVPT. The

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Shenandoah Valley Educational Television Corporation.  
Harrisonburg, Virginia

maps show that DTV operation on channel 11 by WWBT would cause much more interference to existing analog service.

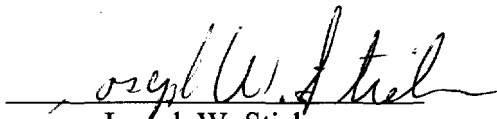
A comparison of the extent of new interference is shown in the following table.

<u>Station</u>	<u>From WVPT</u>		<u>From WWBT</u>	
	<u>Area (sq km)</u>	<u>Population</u>	<u>Area (sq km)</u>	<u>Population</u>
WBAL-TV	165	52000	2005	439000
WTVD	0	0	2596	46000
WSLS-TV	101	1000	0	0
WAVY	<u>0</u>	<u>0</u>	<u>116</u>	<u>2000</u>
Totals	265	53000	4717	487000

The areas and population counts in the above table were taken from the ITS studies.

In summary, WVPT DTV operation on channel 11 would result in relatively low levels of new predicted interference to analog NTSC service. The areas and populations predicted to receive new interference are similar or less in magnitude than would be caused by other DTV operations. Operation on channel 11 in Richmond to replicate WWBT coverage would cause much more predicted interference than would WVPT, approximately nine times the population and seventeen times the area would be affected by WWBT's proposed use of channel 11 versus use of the channel by WVPT. In addition, channel 11 can be allotted to Staunton, Virginia in compliance with the new distance separation requirements of the rules.

The undersigned certifies that this statement and the attached figures were prepared by him or under his supervision and are true and correct to the best of his knowledge, information and belief.

  
Joseph W. Stielper  
Senior Engineer

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**Table 1**

**TV ALLOCATION SEPARATION REPORT**

CallSign : WVPT DTV  
City : STAUNTON, VA  
Coordinates: 38 09 54.0 N  
: 79 18 51.0 W

Channel : 11  
Zone : I

CallSign	Stat	Licensee	Chan	ERP-kw	Latitude	Bear	Notes
File-Number		City	Freq	HAAT-m	Longitude	Dist-km	Short-km
WWBT	LIC	JEFFERSON-PILOT COMM. C	12I	316.00	37 30 23.0N	114.2	CLEAR
BMLCT-861014		KIRICHMOND, VA	201.3	251	77 30 12.0W	175.37	40.2-96.6
WTVD	LIC	CAPITAL CITIES COMMUNIC	11II	316.00	35 40 5.0N	165.7	CLOSE
BLCT-790816		KI DURHAM, NC	195.3	611	78 31 58.0W	285.71	244.6
WBALTV	LIC	THE HEARST CORPORATION	11I	316.00	39 20 5.0N	59.8	CLEAR
BLCT-2477		BALTIMORE, MD	195.3	305	76 39 3.0W	265.46	244.6
WSLSTV	LIC	ROY H. PARK BROADCASTIN	10II	316.00	37 12 2.0N	214.7	CLEAR
BLCT-810128		KF ROANOKE, VA	189.3	610	80 8 55.0W	129.91	40.2-96.6
WAVYTV	LIC	WAVY TELEVISION, INC.	10I	316.00	36 49 14.0N	120.3	CLEAR
BLCT-1700		PORTSMOUTH, VA	189.3	309	76 30 41.0W	289.31	40.2-96.6
WBOYTV	LIC	WBOY-TV, INC.	12I	263.00	39 17 6.0N	325.0	CLEAR
BLCT-860107		KG CLARKSBURG, WV	201.3	263	80 19 46.0W	152.49	40.2-96.6

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**Table 2**

**TV ALLOCATION SEPARATION REPORT**

CallSign : WVPT DTV  
City : STAUNTON, VA  
Coordinates: 38 09 54.0 N  
: 79 18 51.0 W

Channel : 8  
Zone : I

CallSign	Stat	Licensee	Chan	ERP-kw	Latitude	Bear	Notes
File-Number		City	Freq	HAAT-m	Longitude	Dist-km	Req-km Short-km
WGAL	LIC	WGAL-TV, INC.	8I	112.00	40 2 4.0N	47.4	CLEAR
BLCT-2263		LANCASTER, PA	177.3	414	76 37 8.0W	312.15	244.6
WGHP TV	LIC	WGHP LICENSE, INC.	8II	316.00	35 48 47.0N	190.3	CLEAR
BLCT-1313		HIGH POINT, NC	177.3	390	79 50 36.0W	265.22	244.6
WWCPTV	LIC	US BROADCAST GROUP LICE	8I	166.00	40 10 53.0N	3.5	SHORT
BLCT-861023KJ		JOHNSTOWN, PA	177.3	365	79 9 5.0W	224.29	244.6 20.31
WRICTV	LIC	WATE L.P. YOUNG B/C OF	8I	269.00	37 30 46.0N	115.2	SHORT
BLCT-781010KK		PETERSBURG, VA	177.3	320	77 36 6.0W	167.23	244.6 77.37
WCHSTV	LIC	WCHS, LTD.	8I	158.00	38 24 28.0N	277.6	SHORT
BLCT-2473		CHARLESTON, WV	177.3	376	81 54 13.0W	228.15	244.6 16.45
WJLATV	LIC	ALLBRITTON GROUP, INC.	7I	316.00	38 57 1.0N	65.1	CLEAR
BLCT-2199		WASHINGTON, DC	171.3	241	77 4 47.0W	213.38	40.2-96.6
WSWPTV	LIC	WV EDUCATIONAL B/CASTIN	9I	316.00	37 53 46.0N	259.0	CLEAR
BLET-830831KF		GRANDVIEW, WV	183.3	315	80 59 21.0W	150.06	40.2-96.6
WDBJ	LIC	WDBJ TV, INC.	7II	316.00	37 11 42.0N	214.7	CLEAR
BLCT-2428		ROANOKE, VA	171.3	609	80 9 22.0W	130.79	40.2-96.6

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**Table 3**

**TV ALLOCATION SEPARATION REPORT**

CallSign : WWBT DTV  
City : RICHMOND, VA  
Coordinates: 37 30 23.0 N  
              : 77 30 12.0 W

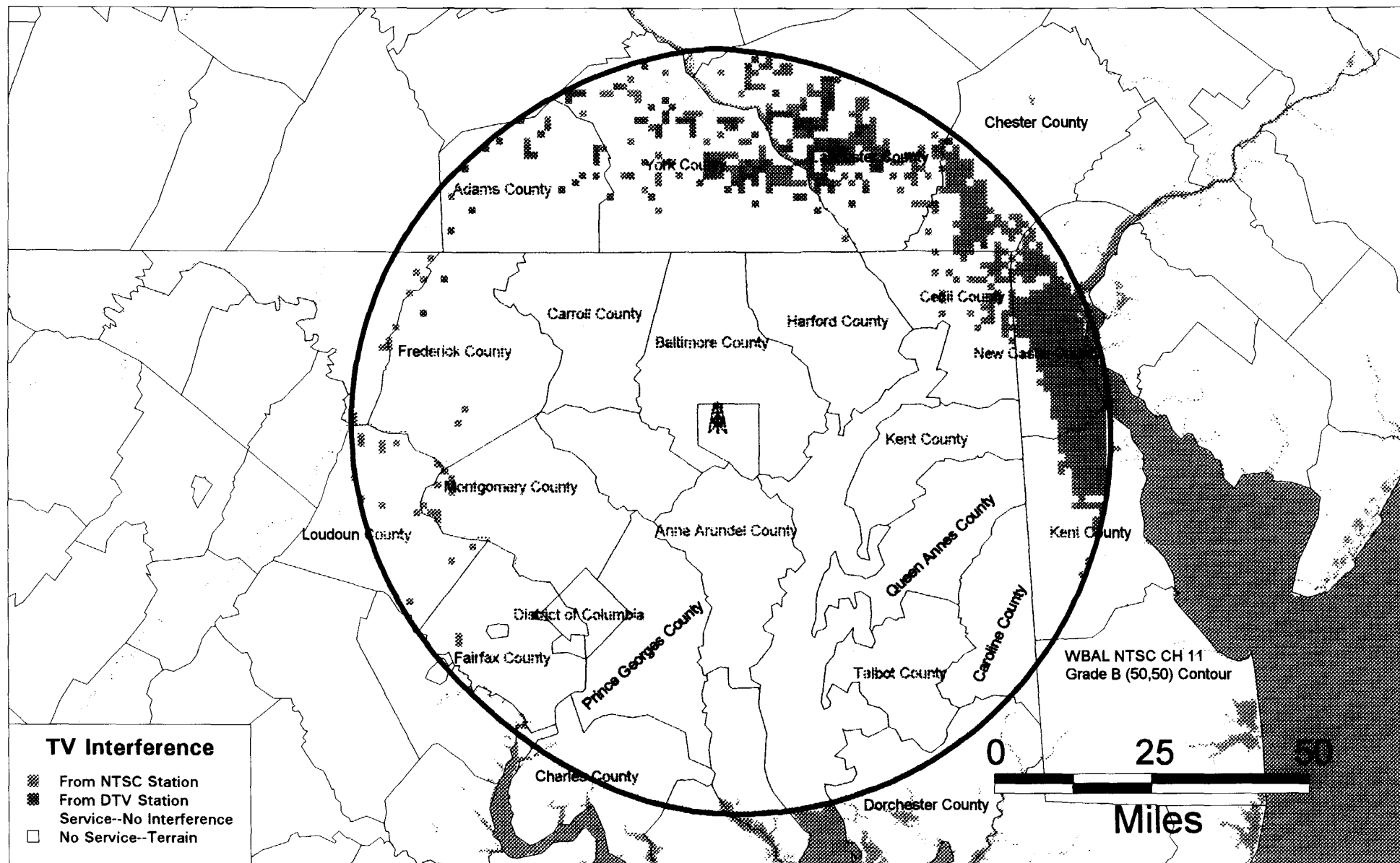
Channel : 11  
Zone : I

CallSign	Stat	Licensee	Chan	ERP-kw	Latitude	Bear		Notes
File-Number		City	Freq	HAAT-m	Longitude	Dist-km	Req-km	Short-km
WWBT	LIC	JEFFERSON-PILOT COMM. C	12I	316.00	37 30 23.0N	0.0		SHORT
BMLCT-861014KIR		RICHMOND, VA	201.3	251	77 30 12.0W	0.00	40.2-96.6	
WTVD	LIC	CAPITAL CITIES COMMUNIC	11II	316.00	35 40 5.0N	204.5		SHORT
BLCT-790816KI		DURHAM, NC	195.3	611	78 31 58.0W	223.83	244.6	20.77
WBALTV	LIC	THE HEARST CORPORATION	11I	316.00	39 20 5.0N	19.8		SHORT
BLCT-2477		BALTIMORE, MD	195.3	305	76 39 3.0W	216.17	244.6	28.43
WSLSTV	LIC	ROY H. PARK BROADCASTIN	10II	316.00	37 12 2.0N	262.5		CLEAR
BLCT-810128KF		ROANOKE, VA	189.3	610	80 8 55.0W	236.82	40.2-96.6	
WAVYTV	LIC	WAVY TELEVISION, INC.	10I	316.00	36 49 14.0N	130.6		CLOSE
BLCT-1700		PORTSMOUTH, VA	189.3	309	76 30 41.0W	116.43	40.2-96.6	

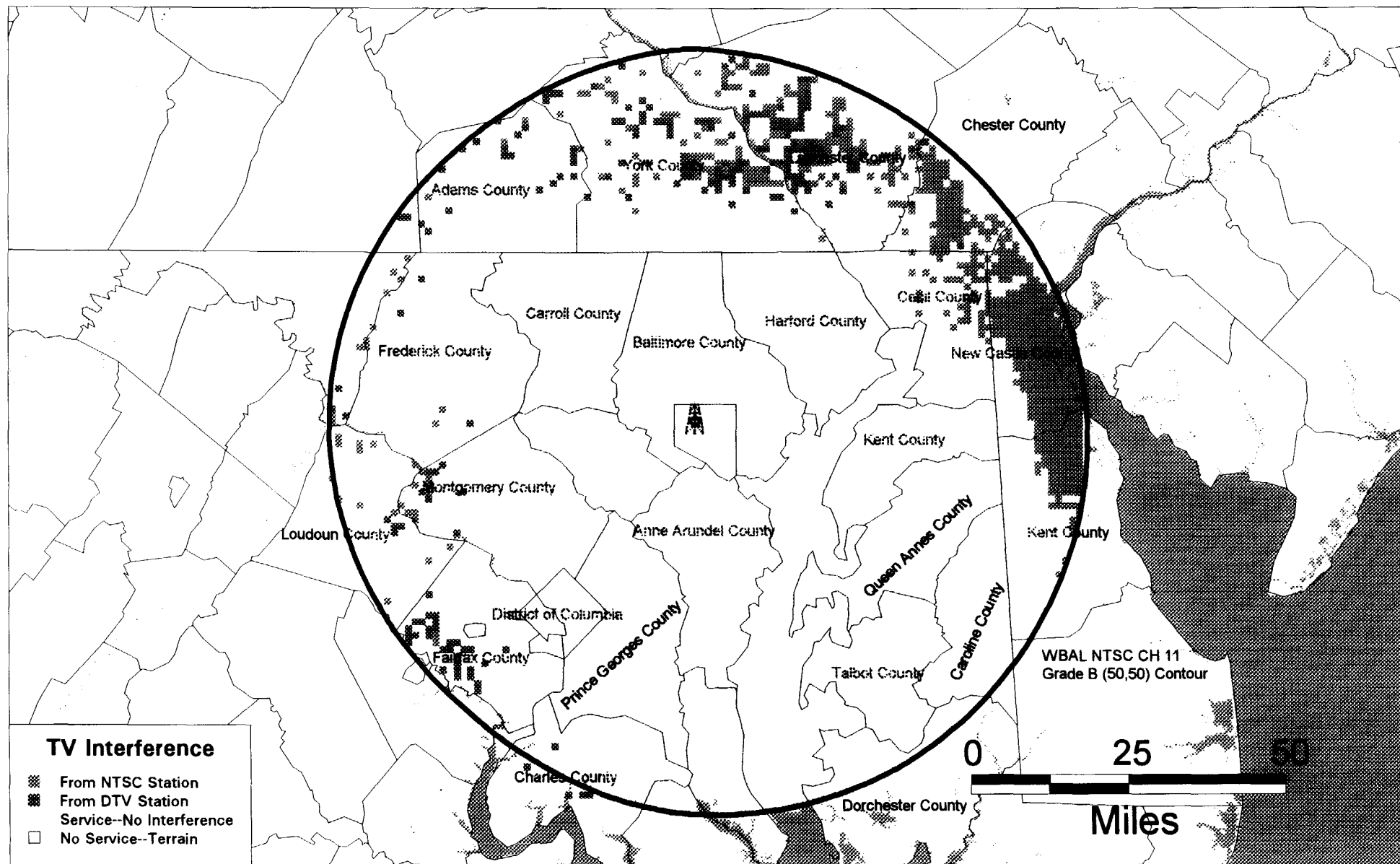


FIGURE 1A

# **Predicted Interference to WBAL NTSC CH 11 without WWBT DTV CH 11 or WVPT DTV CH 11**



**FIGURE 1B Predicted Interference to WBAL NTSC CH 11  
with WVPT DTV CH 11**



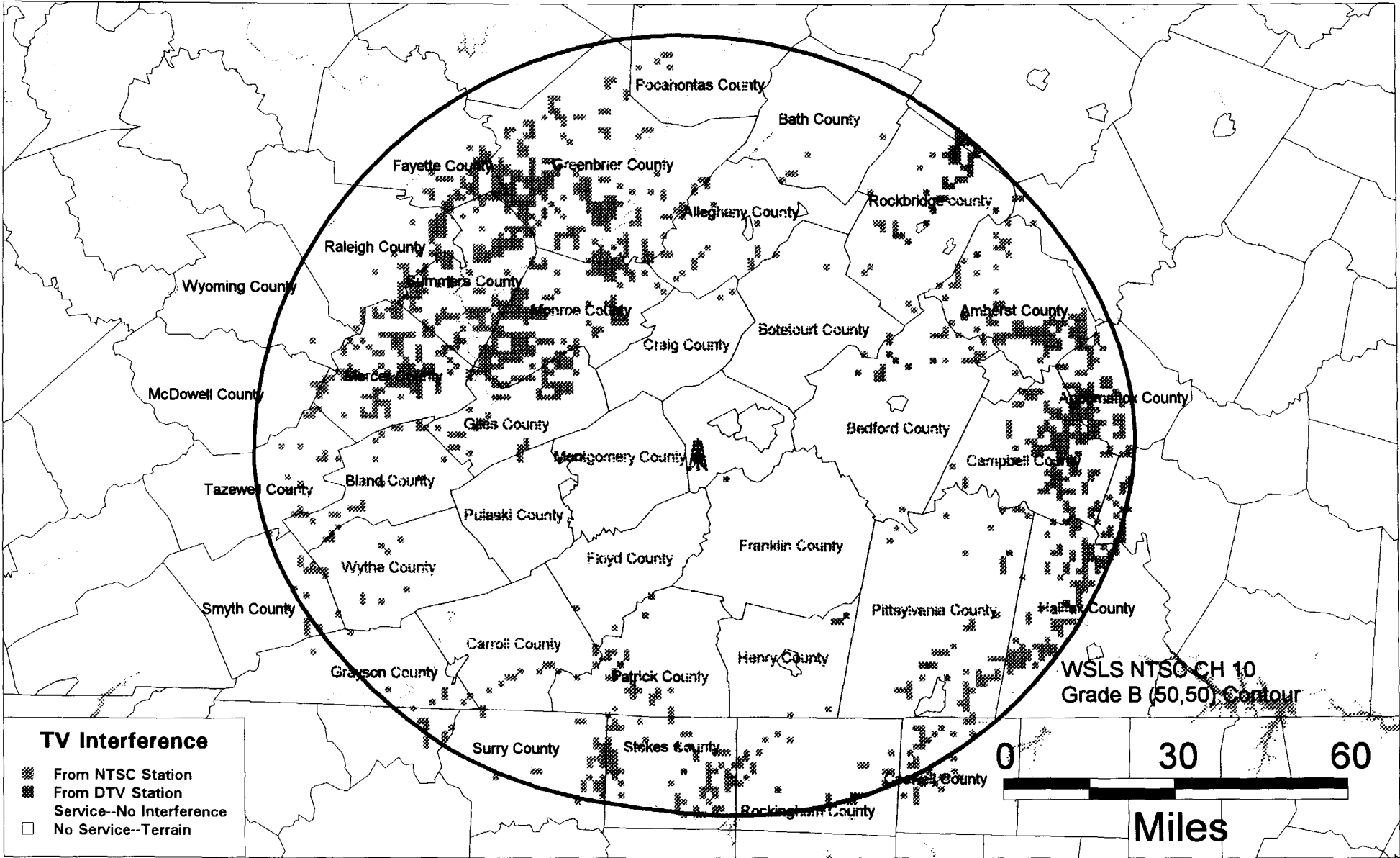
**TV Interference**

- From NTSC Station
- From DTV Station
- Service--No Interference
- No Service--Terrain

WLSL NTSC CH 10  
Grade B (50,50) Contour

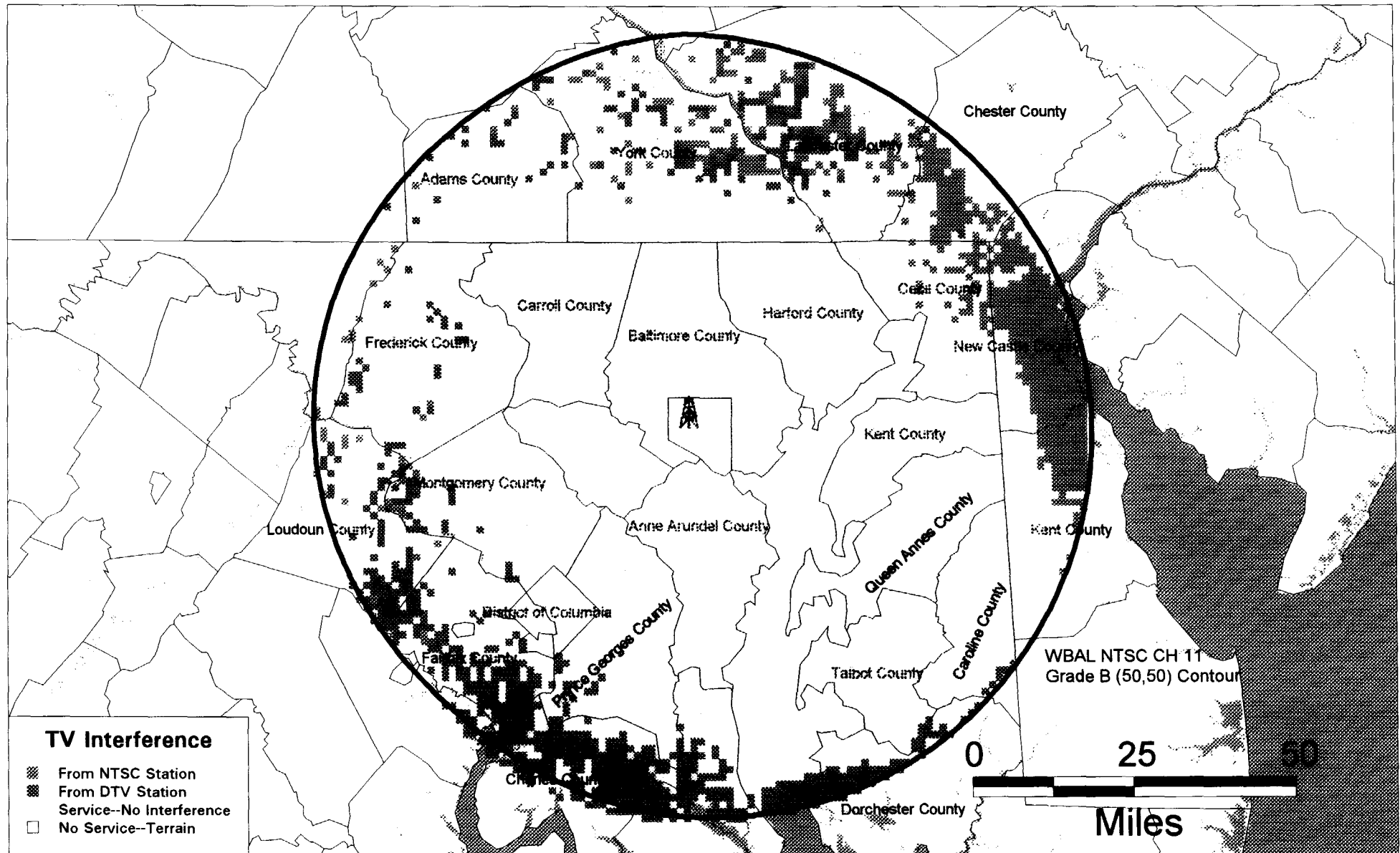
0 30 60  
Miles

**FIGURE 2B      Predicted Interference to WSLS NTSC CH 10  
with WVPT DTV CH 11**

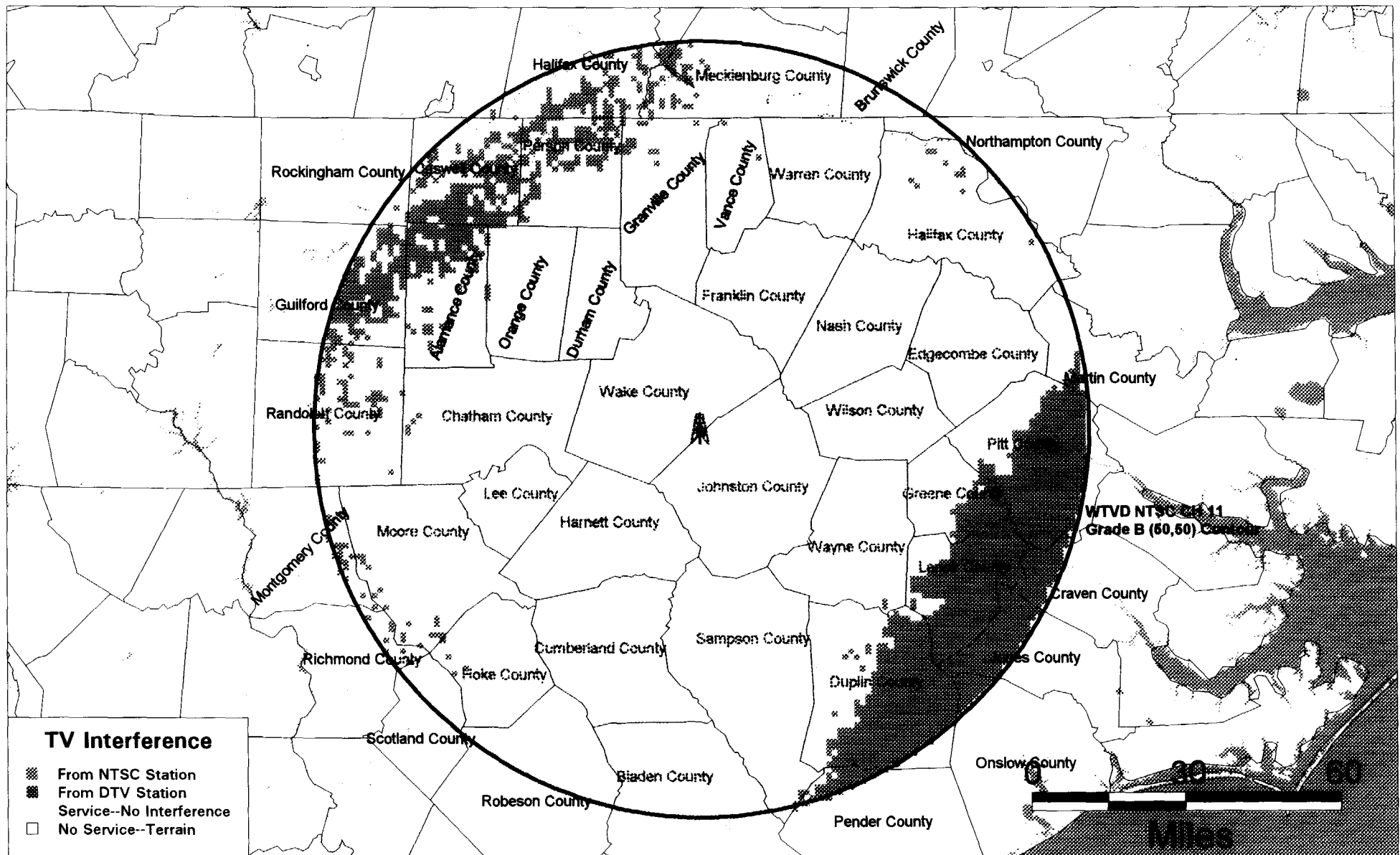


**FIGURE 3A**

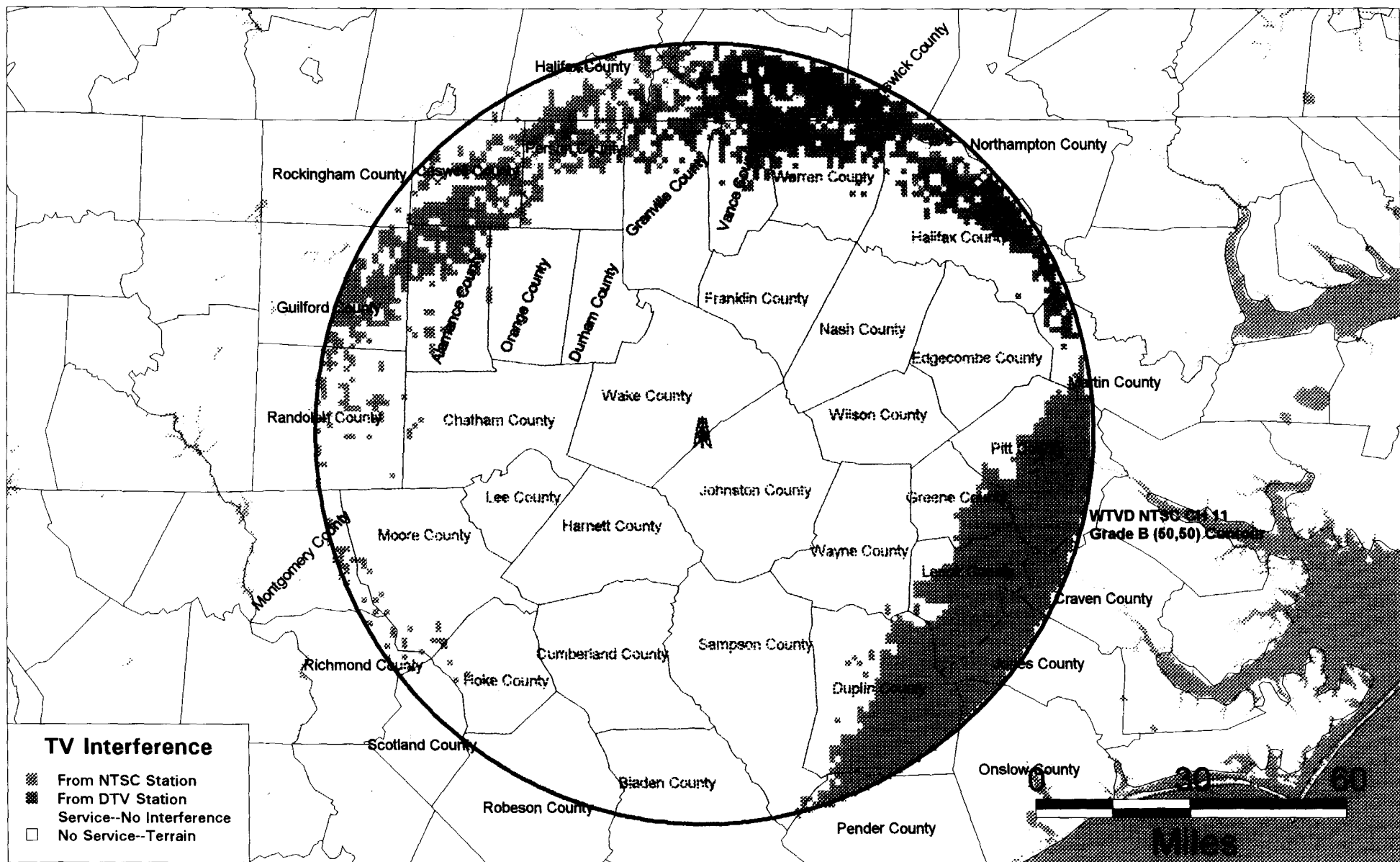
# **Predicted Interference to WBAL NTSC CH 11 with WWBT DTV CH 11**



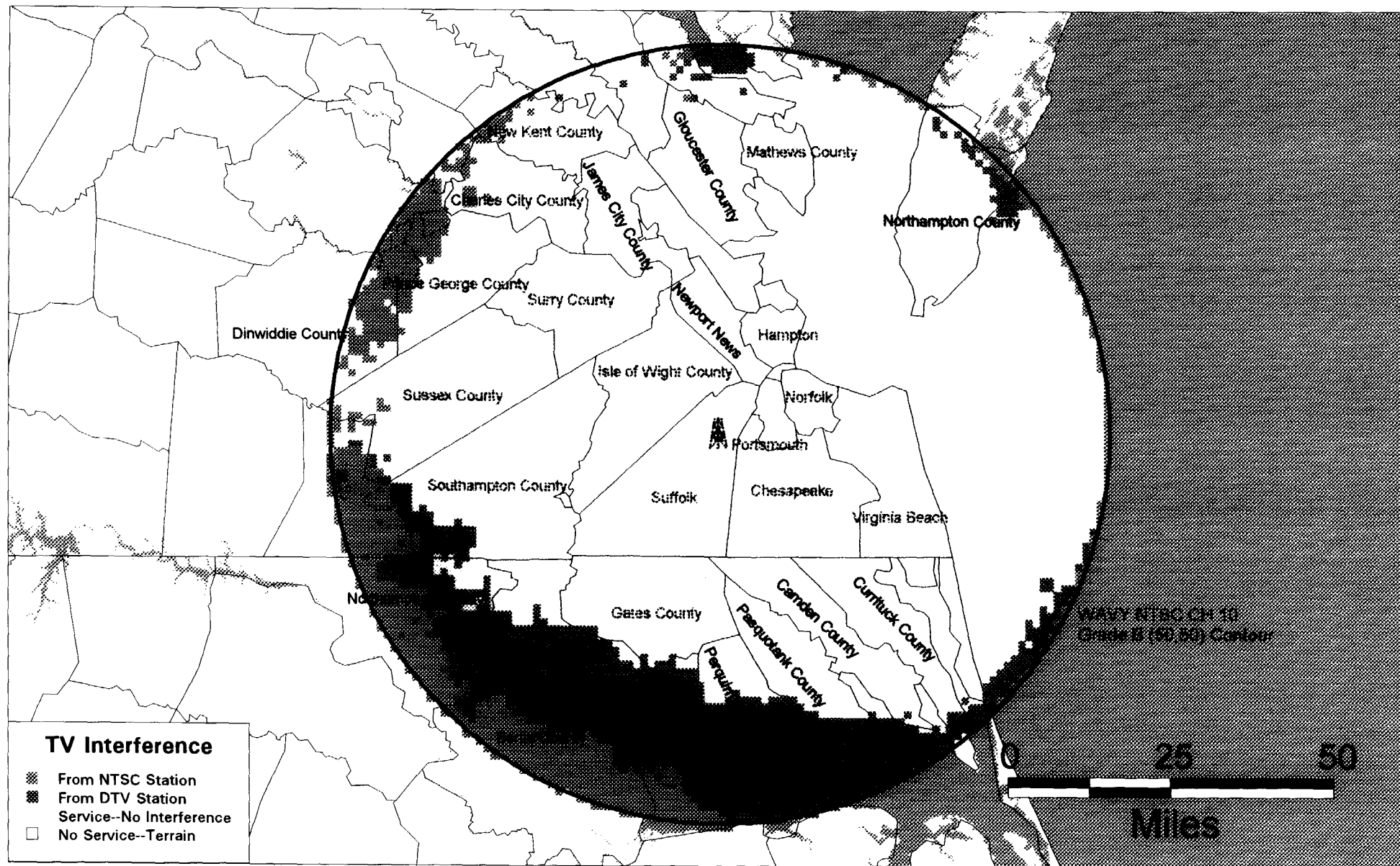
**FIGURE 3B Predicted Interference to WTVD NTSC CH 11  
without WWBT DTV CH 11**



**FIGURE 3C Predicted Interference to WTVD NTSC CH 11  
with WWBT DTV CH 11**



**FIGURE 3D Predicted Interference to WAVY NTSC CH 10  
without WWBT DTV CH 11**





**FIGURE 3E Predicted Interference to WAVY NTSC CH 10  
with WWBT DTV CH 11**

